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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/512,409	07/01/2005	Ulrich Wallner	KUCH-1	4623
7590 06/19/2009				
Scott R Foster Pandiscio & Pandiscio 470 Totten Pond Road Waltham, MA 02451-1914			EXAMINER EPPEL, DRYAN L	
			ART UNIT	PAPER NUMBER
			3635	
			MAIL DATE	DELIVERY MODE
			06/19/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/512,409

Applicant(s)

WALLNER, ULRICH

Examiner

BRYAN EPPES

Art Unit

3635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11, 14-20, 22-30 and 32-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 14-20, 22-30 and 32-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 February 2009 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This is a final office action on the merits for application serial number 10/512,409 filed 10/25/2004. The office action is in response to the amendment filed 2/2/2009. Claims 1-11, 14-20, 22-30 and 32-34 are pending.

Drawings

1. Replacement drawing sheets were received on 2/2/2009.
2. The drawings are objected to because:
 - a. Reference character "97" does not appear in the drawings.
 - b. They fail to show at "the annulus 35 six three-dimensional structures 22" as described in the amended specification page 19, last ¶. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d).
 - c. Reference character "21" has been used to show both a "connection-element" and "connection point" as described in the amended specification page 19, last ¶.
 - d. The drawings must show every feature of the invention specified in the claims. Therefore, each of the bar element and connection elements having a surface of a surface configured as claimed and another area having a surface as claimed must be shown, as described in claim 1 section "d", or the feature(s) canceled from the claim(s). No new matter should be entered.

- e. The drawings must show every feature of the invention specified in the claims. Therefore, the bar element having a spreadable core as described in claims 4-6, or the feature(s) canceled from the claim(s). No new matter should be entered.
- f. The drawings must show every feature of the invention specified in the claims. Therefore, the bar element must have a surface configured as a cone, prism, and pyramid on both ends and a connection element having a hollow cone, hollow prism, and hollow pyramid, as described in claim 11, or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

- 3. The claims are objected to because of the following informalities:
 - g. Claim 7: The phrases "drillings" lacks proper antecedent basis.
 - h. Claim 16: The phrases "the longitudinal symmetry axes" lacks proper antecedent basis.

- i. Claim 29: The phrases "the clamping device" lacks proper antecedent basis.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

- 4. Claims 1-11, 17-18, 25 and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- j. Claim 1. Pg. 5 Lines 3-10 contains language unclear as to what it is purporting to describe. The limitation seems to describe a surface of a surface which is a three dimensional object in section "d" line 6. Furthermore, neither the bar element or connection element appears to have separate areas having the specific geometries as claimed (e.g. the bar element has no portion that is a cone, prism, or pyramid, and another portion that is a hollow cone, hollow prism, or hollow pyramid), especially in light of the amended language requiring an additional annular recess. It is unclear whether the amended annular recess and bounding surfaces are separate features from the earlier described geometric configurations in section "d".
- k. Claims 4-6. The claims appear to suggest that a bar-element may include a spreadable core capable of being pressed against an inside surface of the bar

element, which is indefinite since the core is not a feature of the bar-element. Specifically, in claim 4, "a core of the connecting element or the further bar element" and in claim 6, "wherein at least one of the connecting element and the further bar element exhibits the drilling penetrating the core."

l. Claim 6. The claim language is contradictory in as much as it depends from claim 5. In claim 5, a widening element is moved into the drilling, shown by Applicant as a fastener. Claim 6 claims a fastener inserted into the feature described by claim 5. It is unclear how a fastener may purportedly be inserted into a fastener.

m. Claim 17. The claim language is ambiguous as to the location of slots and appears to relate the slots to areas which have not been defined (e.g. longitudinal axis and lateral surface). Also, the claim suggests the slots may be on the connecting element or further bar-element. Applicant's intent is unclear.

n. Claim 18. The claim language is ambiguous and unclear as to what direction the generated surface tube of a bar element is running.

o. Claim 25. The claim language is ambiguous and unclear as to whether the claimed cavities are the sections of a single stock of bamboo, in which case an aperture in the connector appears insufficient to provide a path between all the sections of a stock of bamboo, or the space between a single stock of bamboo and the connector.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1, 8-11, 14-17, 19, 20, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (U.S. Pat. 3,881,830) in view of Der Yuen et al. (U.S. Pat. 2,703,724).

p. Claims 1, 9, 10, 11, 14, & 15. Kato et al., hereinafter Kato, discloses bar-elements 4 having a round shape, or cylinder, on the outer surface and joinable to form a truss, and connecting elements, described as "A", formed from a regenerative material, in as much as plastic may be restored, and insertable between the bar-elements at junctures where bar-elements axes' are not coaxial to each other (See Fig. 13); as best understood by Examiner, the elements in combination include cylinder shapes and hollow cylinder shapes; the surfaces permitting assembly by plugging together and suitable for a locking connection, by way of the core 3 of the connecting element insertable within a bar-element 4, wherein the connector elements include an annular recess 7 surrounding the core 3 (a.k.a a hollow cylinder for shaft connection) and having two concentric bounding surfaces for the connection, or plugging, of each bar element (See Figs. 12 and 13).

Kato teaches all the limitations of the claim as described above, but lacks wherein the materials for the bar-elements are high-growing plants. Der Yuen et

al., hereinafter Der Yuen, teaches a bar and connecting element system constructed from bamboo (Der Yuen Col. 1 Line 17), interpreted as a high-growing plant, and plastic (Der Yuen Col. 4 Line 14), interpreted as regenerative in as much as it may be restored, as known building materials exhibiting an exceedingly efficient strength-to-weight ratio (Der Yuen Col. 1 Line 18). Therefore it would have been obvious to one of ordinary skill in the art, at the time of the invention, to substitute the material of Kato with the material as taught by Der Yuen since they are known building materials exhibiting an exceedingly efficient strength-to-weight ratio and which would not yield any new or unexpected results.

Regarding the process of manufacturing, specifically cutting, the structure of the apparatus renders the claimed method steps inherent since the claimed method steps would inherently be performed when manufacturing the system as disclosed above.

- q. Claims 2 and 19. Kato discloses wherein the joint between the bar element 4 and connecting element comprises gluing connection (Col. 2 Lines 58-62).
- r. Claim 8. Kato discloses wherein the connection element exhibits a discoidal shape, generally at 5, with a circular base (See Fig. 12).
- s. Claim 16. The combination, specifically Der Yuen, teaches wherein the bamboo manufactured bar elements have symmetrical ends with in line axes (See Der Yuen Fig. 4).

- t. Claim 17. As best understood, Kato discloses slots, shown as the annular recess surrounding and extending into core 3 capable of functioning as claimed.
 - u. Claim 20. Kato discloses the claimed connecting elements wherein the elements are capable of being used as claimed (See Fig. 11).
 - v. Claims 22 & 23. The combination teaches using bamboo as bar-elements which would necessarily require the ends be processed, specifically cut, before any use as claimed. Furthermore, the wall thickness is equal to or less than a predetermined wall-thickness.
6. Claims 3-7, 17, 18, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (U.S. Pat. 3,881,830) in view of Der Yuen et al. (U.S. Pat. 2,703,724) and Hill (U.S. Pat. 2,839,320).
- w. Claims 3-7, 25 and 26. The Kato/Der Yuen combination teaches all of the limitations of the claim except a clamping connection via a spreadable core having an insertable fastener in a drilling. Hill teaches it is well known in the art of tubular member connectors to connect via a clamping connection by way of a spreadable core having an insertable fastener, widening conically, which may be moved into the core for pressing the core against an inside surface of the bar element such that the fastener aperture may extend into the inside of an annular connection element (Hill Figs. 9-13). Thus, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the connection element of Kato with the expandable core via a threaded fastener as described by Hill as a known connecting feature which would not yield any new or

unexpected results. The modified combination would be capable of performing as claimed.

- x. Claim 17-18. The Kato/Der Yuen/Hill combination, for the reasons above, teaches slots, shown as the space between halves 21 and 22, and wherein a spreading element 19 is inserted into a drilling forcing the halves 21 and 22 apart and thereby exerting a force on the inside diameter of the bar element (Hill Figs. 11-13).
- 7. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (U.S. Pat. 3,881,830) in view of Der Yuen et al. (U.S. Pat. 2,703,724) as applied to claims 23,22, and 14 above, and further in view of Casler (U.S. Pat. 1,799,501).
 - y. Claim 24. The Kato/ Der Yuen combination teaches all the limitations of the claim as described above, but lacks wherein the bamboo nodes are pierced or otherwise made passable. Casler teaches drilling holes in the nodes of bamboo to equalize pressure in individual chambers and provide a means for waterproofing. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the Kato/ Der Yuen combination with the step of piercing or otherwise making passable the nodes of bamboo as taught by Casler to equalize pressure in individual chambers and provide a means for waterproofing.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims 27-30 and 32-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Shultz et al. (U.S. Pat. 3,486,209).

- z. Claim 27. Shultz discloses an apparatus, described as a lathe 10, capable of machining and further, producing the claimed elements (*See Fig.*).
- aa. Claim 28. Shultz discloses an apparatus comprising at least one tool, shown generally at 36, grippers, shown as the turret 34, and at least one milling head, shown generally at 36 (*See Fig.*).
- bb. Claim 29. Shultz discloses a slide device 27 for holding a tool (*See Fig.*).
- cc. Claim 30. Shultz discloses a roll device 29 for guiding the machining tools or holdings (*See Fig.*).
- dd. Claim 32. Shultz discloses at least one tool shown attached to turret 34, adapted to rotate around an axis, and with a cutting edge for creating a cavity (*Fig.*).
- ee. Claims 33 and 34. Shultz discloses the tool has a cutting region about its peripheral boundary surrounding a central support and guiding portion, shown as a drill 36 (*See Fig.*), capable of performing as claimed.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRYAN EPPES whose telephone number is (571)270-3109. The examiner can normally be reached on M-F; alt. Fri. off (7:30am-5pm EST.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Chilcot can be reached on (571) 272-6777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Richard E. Chilcot, Jr./
Supervisory Patent Examiner, Art Unit 3635

/B. E./
Examiner, Art Unit 3635